THE BROCHURE SERIES

OF ARCHITECTURAL ILLUSTRATION.

VOL. II. SEPTEMBER, 1896. NO. 9.

ITALIAN RENAISSANCE GRILLES.

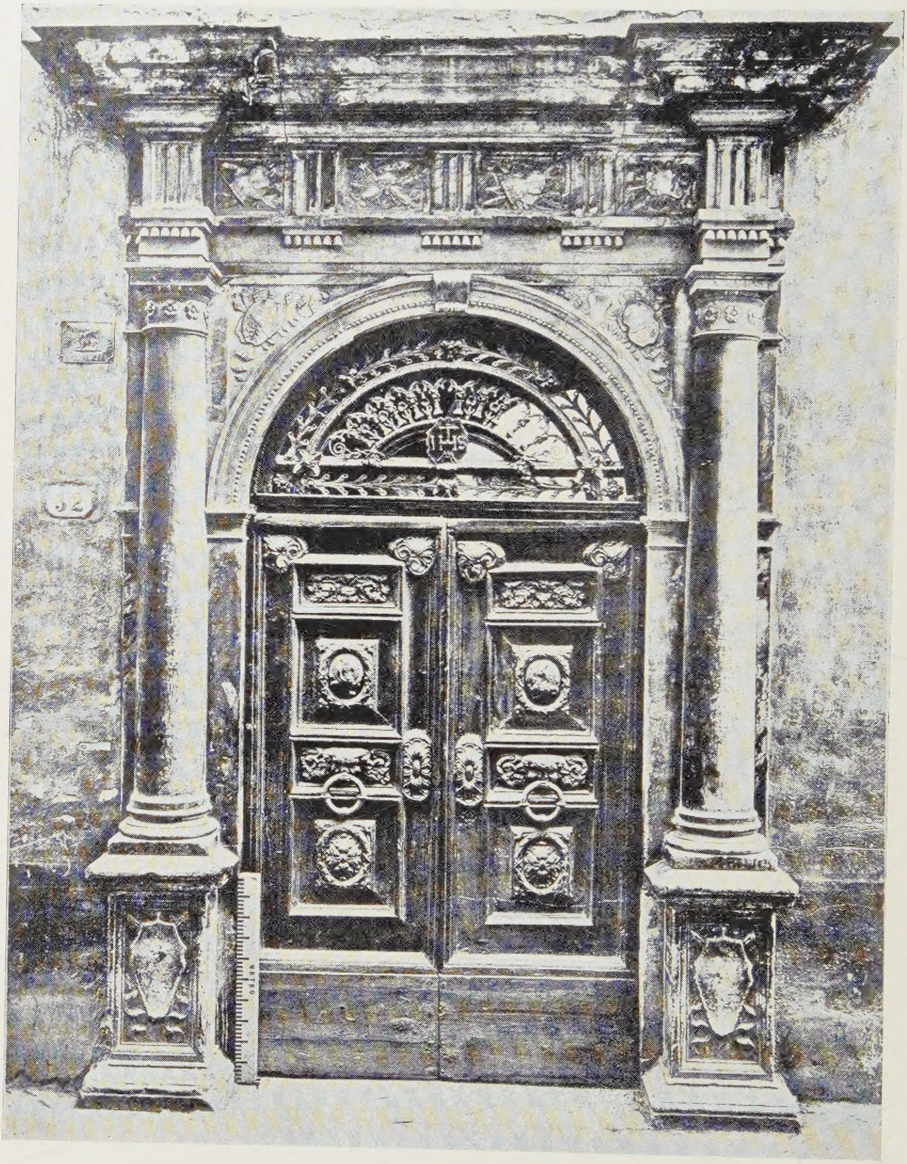
IT is curious to notice how restricted a part ironwork plays in the art of the Italian Renaissance, except in a few special localities, such as Siena and Lucca; iron having been regarded apparently as a material more fitted for practical than for decorative work. Within this restricted field, however, its importance cannot be denied. The finest achievements of Renaissance Italy in metal work were in chased and Damascened suits of armor, which exhibit a beauty of design and perfection of workmanship seldom if ever surpassed.

Door and window grilles, torch and banner bearers, and lanterns are the principal objects of iron treated in an ornamental way, which we find as representing this period. The collection of fine examples of torch bearers and lanterns in THE BROCHURE SERIES for July, 1895, will, with the illustrations of this number, give a fairly comprehensive view of the smith's art of the sixteenth and seventeenth centuries in Italy.

The Italian work of this period is, as a whole, superior in many respects to that of any other country or time. It is nearly always beautiful in itself and thoroughly consistent with the material. It is conventional in treatment without the faults of a large part of the work of later times in all countries, which has leaned towards more or less naturalistic forms, often produced with an amount of labor out of all proportion to the importance of the results.

A recent English writer upon this subject points out the tendency of modern iron-workers to mingle conventional and realistic foliage in one piece of work. This is, as he says, even worse than a design made up of entirely realistic foliage, as the two elements will not blend. It is difficult to impress upon a craftsman, whose training in design has been limited, the importance of unity of style in his work. His inclination is toward intricacy and elaboration of detail, with little regard for the finer qualities of proportion, scale, balance, and above all the suitability of the design to the material in which it is executed. The latter quality is, in the best work, largely an unconscious one, and disregard of it is usually the result of an attempt on the part of the workman to test his skill in a *tour de force* by the mere imitation of forms made in or adapted to other materials. It is in this direction, and in the foolish desire to smooth and "finish" forged iron, that the work of the present fails most conspicuously.

The general revival of the arts in the early period of the Renaissance in Italy showed itself quite differently in the various minor arts. In iron work there was nothing of Greek or Roman design which could be readily adapted to Renaissance conditions. The work of the smith was very slightly developed in classical times, and, as a result, the Renaissance iron-workers could only



LXVI.

Door of the Palazzo Brancoli-Busdraghi, Lucca.

refine and adapt the work of their predecessors in the middle ages. In the later period a greater freedom is evident, and at the same time a better harmony with surroundings in the work used in connection with other arts, as in building, for instance.

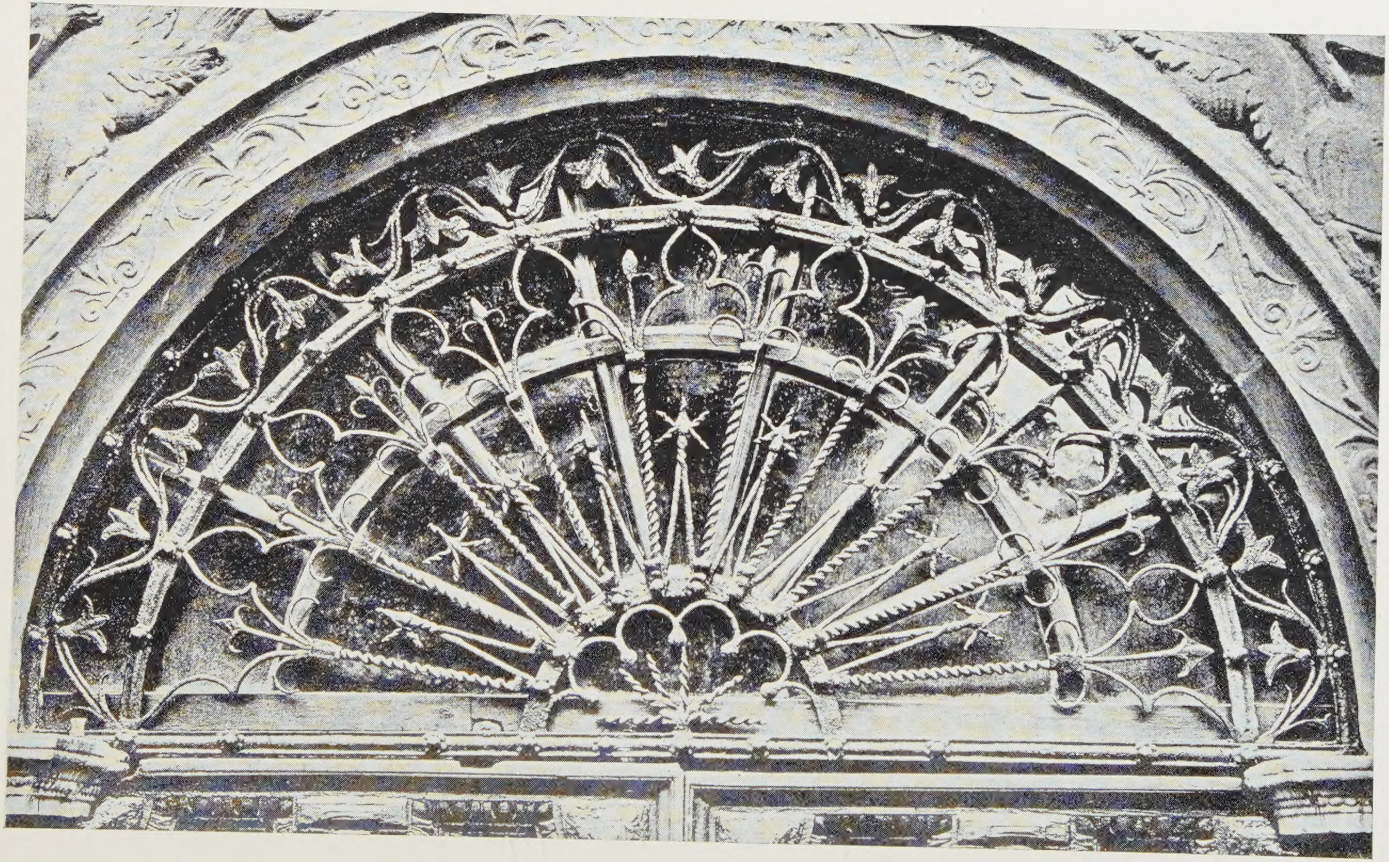
Wrought-iron grilles and railings are found in use, at first in simple and inartistic forms, from the early middle ages. Windows and other orifices for light were small, and often consisted of loopholes only, so that grilles could under no circumstances assume the importance of large dimensions. For doors and gateways grille work was rarely employed, as the times demanded that these should be closed with heavy barriers studded with iron for defensive purposes. The first attempts at artistic grille work are probably to be found in fire screens and articles of furniture of a similar nature. In exterior work, grilles were first used for protection rather than for ornament. They were strong and massive, and were distinctly barbaric in design, and menaced the trespasser with pointed bristling ends. Later, under Gothic influence, grilles came into use in churches to close in chapels, altars, monuments, etc.; and also in the cloisters and courtyards to enclose wells. With this more extended use they gain in richness and elegance. Altar and chapel grilles grew larger and higher, at first treated mainly with vertical square-iron supports filled in more or less with horizontal straps and ornament. Afterwards a form appeared constructed on geometrical lines, which is the forerunner of the more elaborate geometrical patterns of the Renaissance, such as the quatrefoil design shown in Plate LXXII.

During the Renaissance the use of grille work increased further, not only in churches, but also in private houses and in public buildings. Oriels and alcoves were often divided off from the principal apartments by grilles, and window openings and fan lights were richly grilled. Square and angle iron was replaced largely by round iron.

Renaissance grille work may be classed under three groups: First, the early style of grille formed of bars was retained, together with the same kind but with added ornament, and such modifications as the new style demanded. The second group consists of the further development of geometrical tracery, carried out in the flat. In combination with the predominant quatrefoil designs of the Gothic period are to be found numerous other varieties, such as the trellis in which parallel bars cross each other obliquely. The latter form, however, is more frequent in German work than in Italian, where also the predilection for round iron is also more marked. The third group comprises panels, consisting of a framework filled in regularly with some specific pattern. Inasmuch as these rarely occur in the styles of the middle ages, they may be counted as belonging to the innovations introduced under the Renaissance. The form of the filling is, of course, governed by the position it is to fill. Along with the vertical and horizontal rectangular filling are to be found the square, the circle, the ellipse, the stilted and depressed arch, the semicircle and the lozenge, which, for the most part, form the basis of the pattern. The right angle, square, circle and ellipse are principally used in door and window fillings, while the stilted and depressed arches and semicircle are adapted to fan lights. Lozenge-shaped panellings, and those with irregular angles, are found almost only in staircase ballustrades. Besides these, all sorts of irregular forms are occasionally found.

Two principal features serve to form a basis for the classification of panelling. The design may show a distinct top and bottom end, when it is simply symmetrical. Or, the ornament may be developed from the centre in all directions in equal proportions, when it is bi-symmetrical, or repeating. Little divergencies from absolute symmetry and perfect regularity often occur so far as to affect detail only, without disturbing the regular effect of the whole.

In arched or semicircular openings in which fan lights are used, the treatment is sometimes upright and symmetrical; or, — and this is specially true of semicircles,— in order to avoid the inelegant meeting of the radial bars at one centre, a smaller open semicircle, or one which is ornamented independently, is intro-



LXVII.

Grille over the Door of the Palazzo Orsetti, Lucca.

duced. This will be seen to be the treatment in all of the designs illustrated in our plates. It also happens occasionally that the semicircle is divided into separate zones, each of which is treated as a band of ornament in itself. This form of design is also used, to a certain extent, in nearly all of the examples shown.

LXV.

DOOR OF THE PALAZZO ORSETTI, LUCCA.

This plate, and the next one, are given to show the relations of the grilles (which are given at larger scale in the succeeding plates) to their architectural surroundings. It will be seen that each design has a marked individuality, although taking its place in the general design without unnecessary prominence.

LXVI.

DOOR OF THE PALAZZO BRANCOLI-BUSDRAGHI, LUCCA.

The grille in this design, as compared with that in the doorway of the Palazzo Orsetti, is more delicate and lighter in treatment, and conforms with the details surrounding it. The treatment of both these examples shows an intelligent grasp of the design as a whole, and the superiority of the Italian ironwork, as elsewhere pointed out, in its thorough adaptability to the conditions it was intended to fill.

LXVII.

GRILLE OVER THE DOOR OF THE PALAZZO ORSETTI, LUCCA.

LXVIII.

GRILLE OVER THE DOOR OF THE PALAZZO BRANCOLI-BUSDRAGHI, LUCCA.

LXIX.

GRILLE OVER THE DOOR OF THE MONASTERY OF BARBANTINE, LUCCA.

LXX.

GRILLE OVER THE DOOR OF THE PALAZZO CENAMI, LUCCA.

These four grilles show a marked similarity of treatment, and a comparative study of them will be very instructive to any designer of wrought iron. The arrangement of the design upon the radii of a circle is not, of course, the only system upon which such a form can be laid out; but it is naturally the simplest and first suggested, and is admirably suited to the purpose in the present instance. Unlike most designs composed largely of linear forms, a grille often counts as light against dark, or the reverse, depending upon the position of the observer; and for this reason the open spaces surrounded by the forms of iron must be as carefully considered as the skeleton itself. Upon examination, it will be seen that these grilles are remarkably satisfactory when considered in either way.

LXXI.

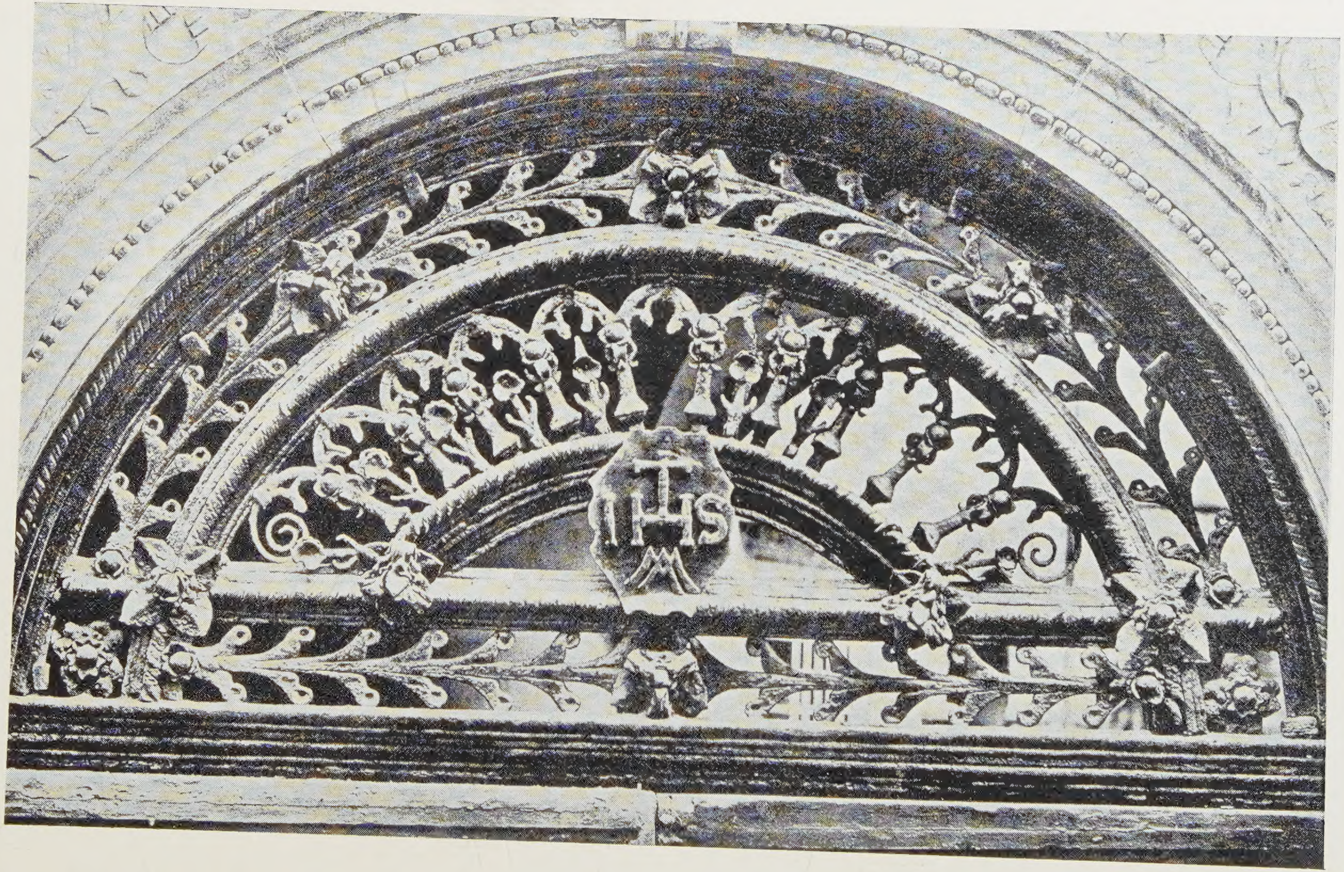
GRILLE IN THE CHURCH OF S. GIORGIO DEGLI SCHIAVONI, VENICE.

This grille is of a class of strapwork characteristic of the period, and familiar through numerous examples. It is an exceptionally good instance of the production of a geometrical diaper pattern in a thoroughly wrought-iron manner. German, French and Spanish ironworkers, although often indulging in greater elaboration, have never approached the best of this work in the instinctive feeling for the material, the restraint, and at the same time the richness of detail. German wrought-iron gates and grilles of this period, for instance, show, as a rule, more freedom, and often grotesqueness, but lack the appreciation of the fundamentals of the best ornamental design. They abound in interlaces and scrolls, but do not meet the requirements of conditions, æsthetic and utilitarian, as does the Italian work. The delicate proportioning of pieces, with the slight variations inseparable from hand-wrought work, and at the same time the careful preservation of the main geometrical forms and lines, is especially worthy of notice in this example, and we might say of emulation in modern work.

LXXII.

GRILLE IN MADONNA DEL ORTO.

The simple design of this grille is perhaps not to be compared with the more elaborate ones shown in the preceding plates, but its very simplicity is characteristic. It is unquestionably a design for the place, its lines harmonizing and conforming with those about it. In workmanship it is also perfectly straightforward; the only suggestion of treatment in the least out of character with the material being the joining of the two scrolls in the small semicircle in the arched top, where joints have been made which are seldom used in the best work.



LXVIII.

Grille over the Door of the Palazzo Brancoli-Busdraghi, Lucca.

The Brochure Series
of Architectural Illustration.

PUBLISHED MONTHLY BY

BATES & GUILD,

13 EXCHANGE STREET, BOSTON, MASS.

Subscription Rate per year . 50 cents, in advance
Special Club Rate for five subscriptions . . $2.00

Entered at the Boston Post Office as Second-class Matter.

It is seldom that American readers have an opportunity to know anything of the actual work of architectural students in other countries. This is especially true of what is being done in England, as most of our young architects, if they go anywhere abroad to stay and study, choose Paris as a location. For this reason, the methods of English students, and the opportunities open to them, have been given prominence in these columns. The competitions conducted by the Royal Institute of British Architects have been referred to before, and the conditions described. The prize drawings in the various Institute competitions are exhibited annually and attract considerable attention among the older architects, as well as among the younger men. This year they are exhibited at the rooms of the Institute. The Institute itself appoints one of its members to report upon the drawings submitted, and his report is published at length in its journal. This year the duty fell upon the vice-president, Mr. W. M. Fawcett.

The programme and conditions governing the competitions are published several months in advance, and it is only required that designs shall be originated and executed entirely by those who submit them.

The prizes offered for original design include the Soane Medallion and one hundred pounds, the Tite prize, and the Grissell competitions, all of which have been described before in the BROCHURE SERIES. These prizes naturally attracted the largest numbers and the most important work. The subject for the Soane Medallion was a "Market Hall." The designs submitted were mostly mediæval rather than classical in character. The subject for the Tite prize was an "Italian Villa"; and that for the Grissell competition, the bay of a church.

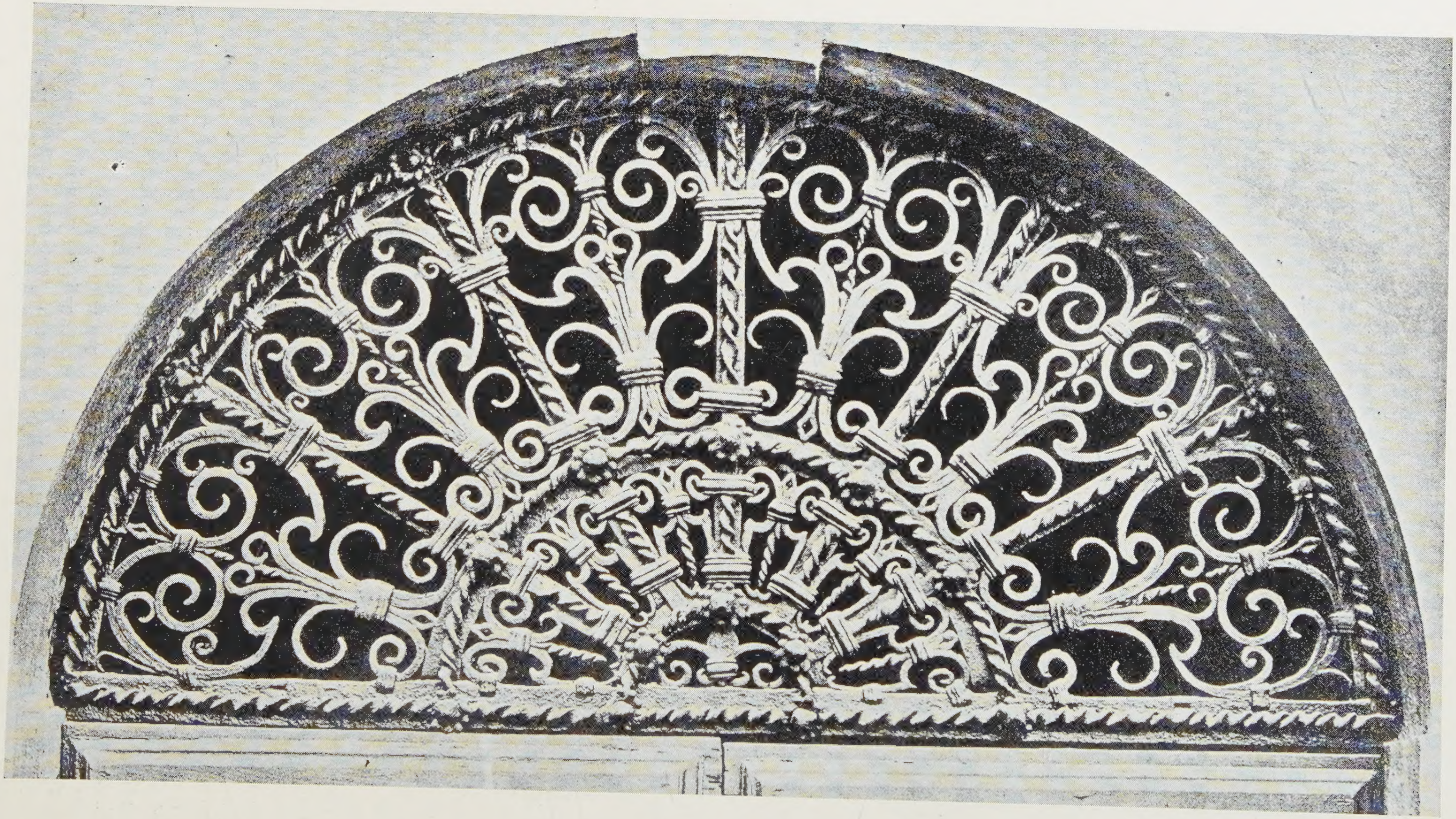
The Owen Jones studentship, founded for the study of ornament and colored decoration, brought out two sets of drawings in color from existing decorative work. Mr. Fawcett speaks in high praise of the work submitted for this prize. This is a line of investigation in which none of our American scholarships have as yet entered, although the student sent abroad by the National Society of Mural Painters will naturally devote some of his attention to this field of study.

The measured drawing competition has attracted three sets of drawings: One of Melrose Abbey, and two of the church of St. Mary-le-Strand, London. These are all praised as excellent work.

The Pugin studentship for the study of mediæval architecture in Great Britain has eight competitors, also giving evidence of careful study and promise of good work in future.

Mr. Fawcett says in conclusion: —

"In looking over the large amount of work which has been undertaken for the chance of the prizes, most of which involves an undertaking to prosecute studies still further, one cannot help feeling for the disappointment of the many who receive here nothing but a word or two of praise, or perhaps of blame. To them there may be the feeling of inquiry as to what good they have got from their labors. I trust they have had sufficient interest in their work not to feel depressed because others have taken the prizes. Though I do not consider myself an old man, I am old enough to have noticed that the men who succeed best in their professions, whether lawyers, doctors, chemists, or men of other classes of science or literature, are those who take a real pleasure in their work — who seem never to find it irksome, but seem often to do it for the fascination they find in it. I feel sure it is more so with those who take up art as a profession, whether it be painting, sculpture, or the branch we are practising ourselves. The thought and study which you have



LXIX.

Grille over the Door of the Monastery of Barbantine, Lucca.

given to your work has, I feel sure, been of great benefit to you; and I hope it has been a pleasure also, and that you can all join one of your brother competitors in his motto, and say from your heart, 'Labor ipse Voluptas.'"

Extract from the Address of Professor Aitchison

To the Students of the Royal Institute of British Architects.

No teaching will give genius or parts to learners; but I think I may say, without fear of contradiction, that untiring diligence is an absolutely necessary qualification. And this has been so evident to those who possess genius, that Buffon defined it "as the art of taking trouble"—which we all know it is not. But diligence is so absolutely necessary for the development of genius, that it is excusable to confuse the necessary servant with the master.

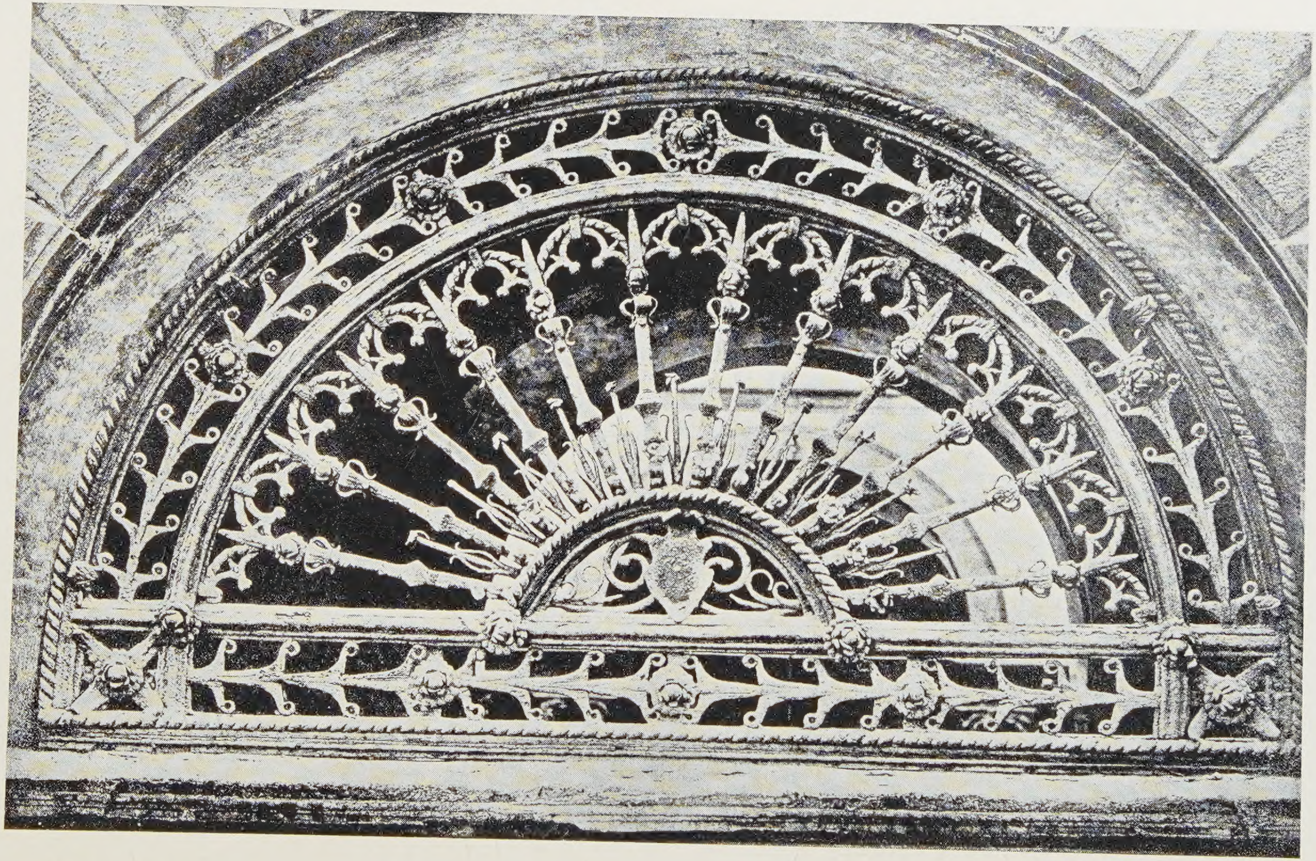
The wisest saying of the Delphic oracle was, "Know thyself," and it can be as usefully applied to themselves, by those who study architecture, as by others in the various exigencies of human life. It is obvious that if one knows one's self one can best choose the part of architecture most fitted to one's aptitudes, and one can map out those parts that are essential to be learnt; by this means not only is much useless labor saved, but that worst of all shipwrecks is averted, the having embraced a profession that is not congenial and for which one finds one's capacities are not fitted, and this, too, when it seems too late to throw up the profession. I recollect hearing of a pupil of Laing's—the Laing who built the Custom House—who found architecture so uncongenial that he embraced the law, and became a vice-chancellor, as Alfieri the barrister became a celebrated architect. It is within the knowledge of most men that many of those who have become distinguished have changed their profession, but these men have mostly had a natural aptitude for the subject they eventually embraced and excelled in.

To those unfortunates who have embraced architecture but have no aptitude for it—nor, as far as they know, for anything else—I can only recommend the behavior of Scotchmen under the circumstances. I think I may say that Scotchmen are the only people of the United Kingdom who have a good education, and by this I mean a moral education. Each man who finds himself in this position says to himself, "This is my only chance in life; I have no natural aptitude for it, but I must try by application and striving in season and out of season to make up for my lack of aptitude," and you rarely find that they fail in whatever walk of life they have embraced, for they mostly gain a good position.

Youth is naturally enthusiastic and ambitious, and would fain know everything connected with its occupation. Most students have probably read Bacon's programme of mastering all human knowledge; but we are not all Bacons, and had Bacon lived now, when the memory wanted for one small branch of science is greater than that given to most men, he would never have set out on so impossible a quest.

A student, for example, has to see what a column or stanchion will safely bear, and so he wants to know the laws of flexure, and finds himself referred to Poisson. He gets Poisson's book, but finds that to understand it he must master the differential calculus; he gets a treatise on that, but finds it would take him his whole life, if he could learn it then. Yet as the multiplication table is to arithmetic, so is the differential calculus to the higher branches of mathematics; he therefore comes to the old conclusion "that everybody cannot do everything."

It is, perhaps, a laudable ambition to take one of the great architectural geniuses as a pattern, but you should have common sense enough to calmly and dispassionately review your own powers and capacities before entering on a serious attempt at imitating his achievements. There is only one genius in several millions of people who is blessed with the capacities of the great architects, who has the making of a Brunellesco, an Alberti, a Peruzzi, a Bramante, a Leonardo, or a Wren; and I only wish



LXX.

Grille over the Door of the Palazzo Cenami, Lucca.

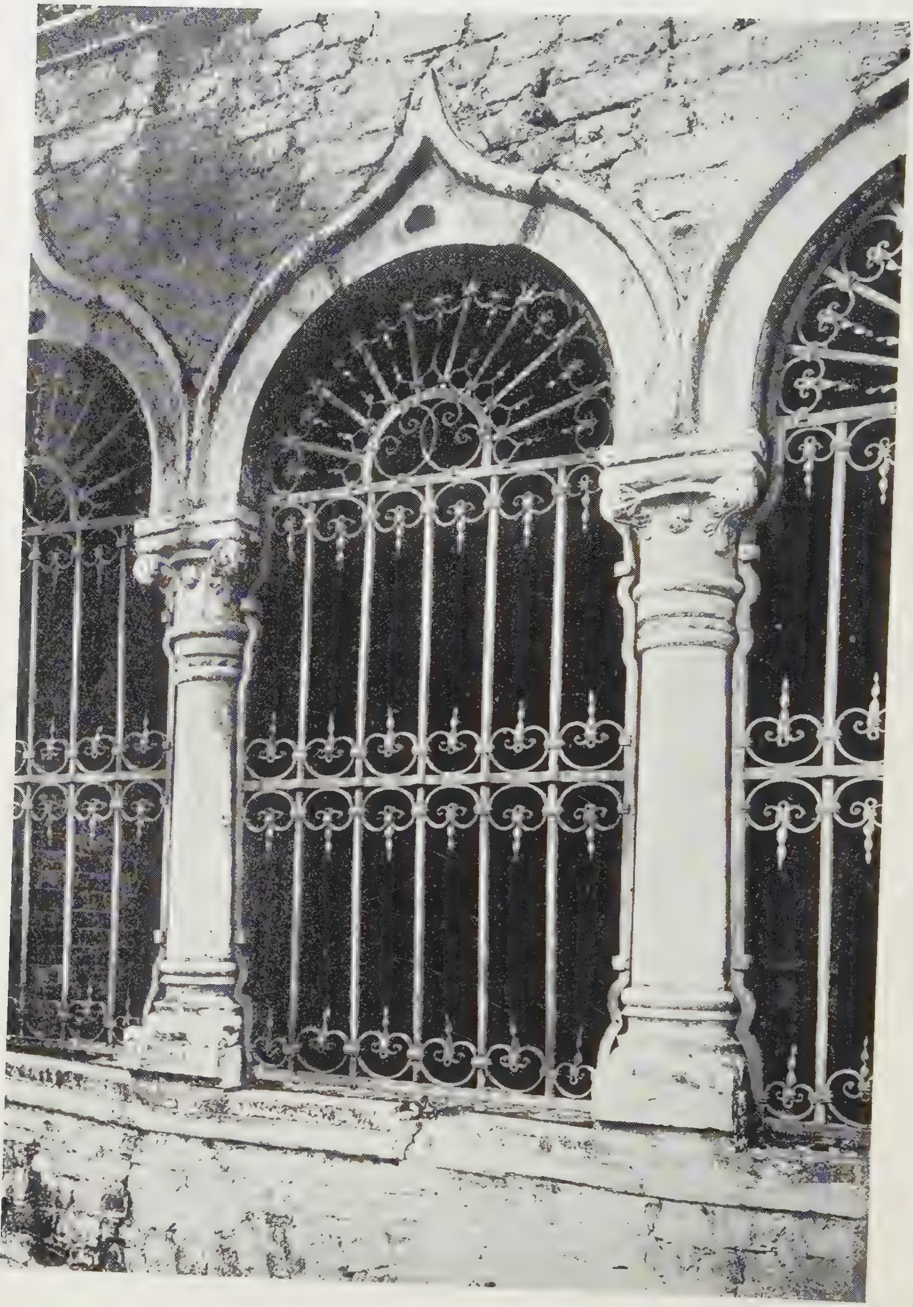
more of those who find themselves incompetent would abandon the profession. The average capacity of mankind is not great, and yet each one wishes to be the bright particular star of the world. Each unit of mankind cannot endure the idea that his capacity is not equal to that of the greatest genius; but he will admit that he is deficient in industry, and in that judgment which guides a man to concentrate himself on the principal aim of his life. This shows us one of the weaknesses of humanity, to be ashamed of admitting that which is a pure accident, over which we have no control; and to admit, without blushing, our neglect of those things that are in our power. It is the fashion to encourage the belief that all men are born with equal capacities, as it is to suppose that every epoch is equal in mental and moral power, and that the difference depends on teaching, as if cutting and polishing a flint stone would turn it into a diamond. I recollect Roebuck talking this sort of nonsense at Sheffield; and after pointing out what John Stuart Mill could do at thirteen years of age, who had then mastered Greek, Latin and mathematics, he says: "But if John Mill could do what he described, why may not John Brown do as much, or nearly as much?"

The subjects that seem to me of the utmost importance are — first, the recognition by students and their teachers that architecture is a structural art, and that until this is realized and acted on no great improvement is likely to take place. All the materials we use have weight, and in their ultimate position have size too, and in the positions they are placed have, as well as downright pressure, cross and diagonal strains. All these strains occur in almost every building, and must balance one another, or else the building becomes deformed or ruined, or tumbles down. The theory of the strains that produce equilibrium is called statics. The architect with the keenest observation, the strongest memory, and the greatest experience is a mere child compared with one who is a master of statics and the strength of materials. Secondly, we all admit that without proportion buildings and their parts are unsightly, and we endeavor to train the eye to good proportions by studying classical buildings; their proportions, however, mainly give the statical results gained by experience at the time the buildings were erected; if these studies are pursued too long they are apt to make us fall in love with a state of knowledge inferior to that which we now possess.

That friend of our youth, Mr. Ruskin, partially enlightened us on this subject by pointing out the infinite variety of proportions in nature, most of which we find agreeable to the eye, and we now know that what may be called the fundamental proportions depend on the weight to be carried, the strength of the material and its height and size. Statics allow us to go further, for, knowing the strains to be borne and where they come, and the strength and peculiarities of the material, we may mould it into various forms, either by cutting away useless parts or by adding to the bulk in certain directions. By statics we know where there is a change of function, and where various strains are concentrated, and these parts call for some expression, and the only way of expressing them architecturally is by moulding.

The proper arrangement of each chamber for the duties it has to perform, the collocation of the different chambers, and the access to them by means of halls or passages without unnecessary waste of room, is commonly denoted by the word "planning," and in reality it includes much more, as, for instance, their proper lighting, aëration, ventilation and warming; in fact, the enabling us to make the different portions fulfil their ends is the foundation of all good architecture. But man wants more than this; he wants not only certain parts to be more striking than others, but to make the whole have such an external appearance that it tells us the use of the building and evokes the emotions proper to its use. All we have to deal with outside are walls and roofs, but we may want porticos and porches, towers, lanterns, spires and domes for certain uses and under certain circumstances.

Inside we have much the same elements, but we have as well floors, ceilings and staircases; and, although we



LXXI.

Grille in the Church of S. Giorgio Degli Schiavoni, Venice.

always want floors to be flat, there are circumstances where steps are required to give elevation and dignity to certain parts, and there are also certain shapes which add beauty or dignity to the rooms, and if the ceiling is vaulted or domed we may want it made striking or beautiful.

One particular point is usually missed in speaking of architecture,—the skill in combining the junctions between forms of diverse or opposed shapes and of marking the different changes of function where they occur, or of marking the concentration of strains. These, as I have mentioned before, are accomplished by moulding, and these mouldings are to give us varieties of light and shade and to have a sort of logical sequence in their forms. The Greeks were the first and the greatest masters of mouldings, which were, of course, shaped to be played on by brilliant sunshine and in a clear air. The Roman mouldings were only badly designed Greek ones with infinitely less variation. The second masters of moulding were the Gothic architects, who designed them for the misty climates and feeble sunshine of the countries they lived in. They were as logical as the Greeks, though destitute of their refined artistic sensibilities, and since then the study of profiling has been abandoned.

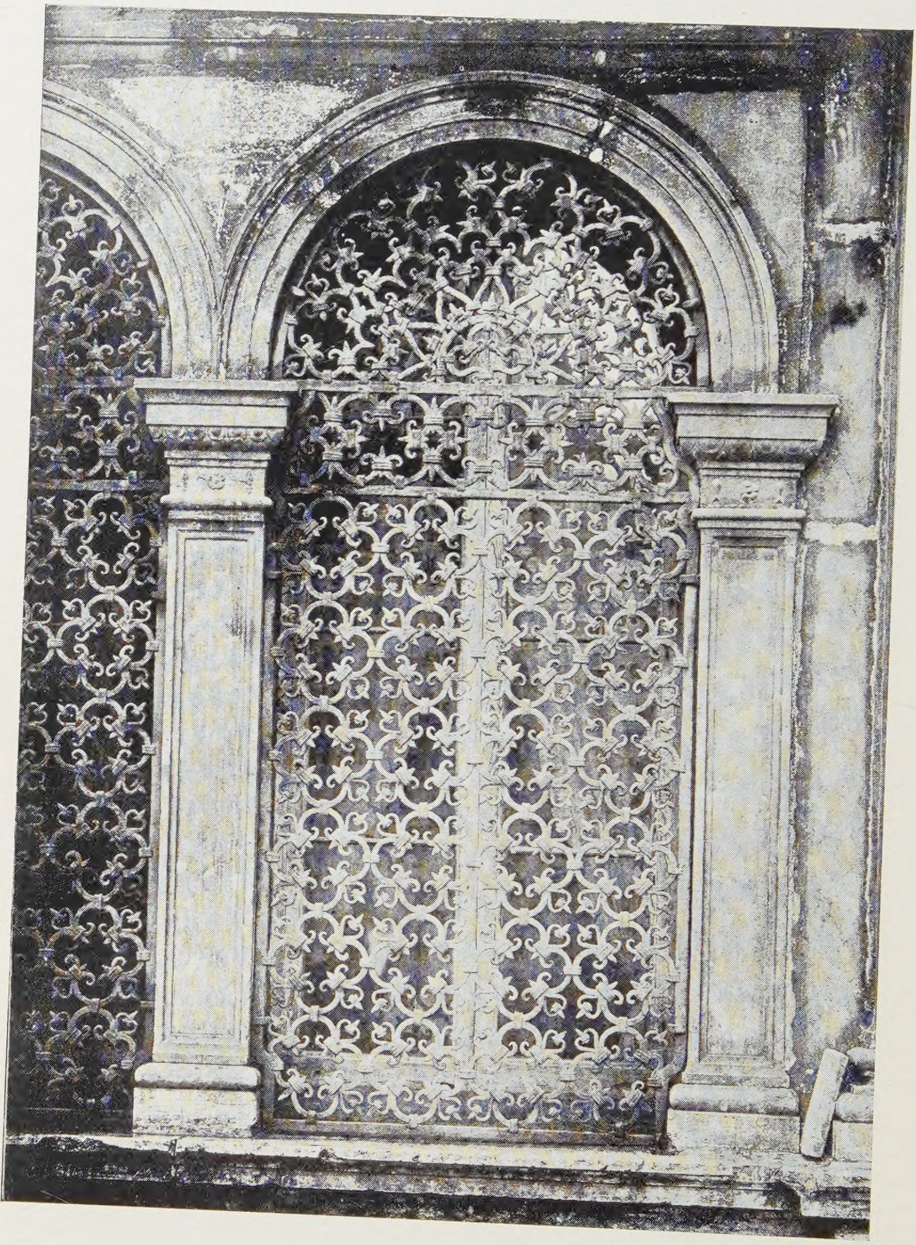
I say nothing of sculpture, in which I included naturalistic as well as vegetable and animal forms, for this is another art; but it must be exercised with due regard to the architecture, and must neither be incongruous nor destroy the scale of the part, the chamber nor the building. You cannot expect sculpture from architects, as it takes the life study of an artist, and architecture alone may be said to embrace the life studies of many men,—men of science, men of ingenuity and men of art. When, however, the architect is so transcendent a genius that he can master his own art and that of another artist, he excites our wonder and our admiration; but to be a bad architect and an execrable sculptor too is not a combination to be admired, and still less to be proud of. It merely entitles the possessor to Martial's compliment, who called the amateur who did so many things nicely a great meddler.

Notes.

An interesting feature of the ARCHITECTURAL REVIEW will be a *résumé* of the competitions of the Society of Beaux-Arts architects, with illustrations of the medal designs, to be prefaced by an article fairly stating what the Beaux-Arts Society stands for. This will be contributed by Mr. John Galen Howard.

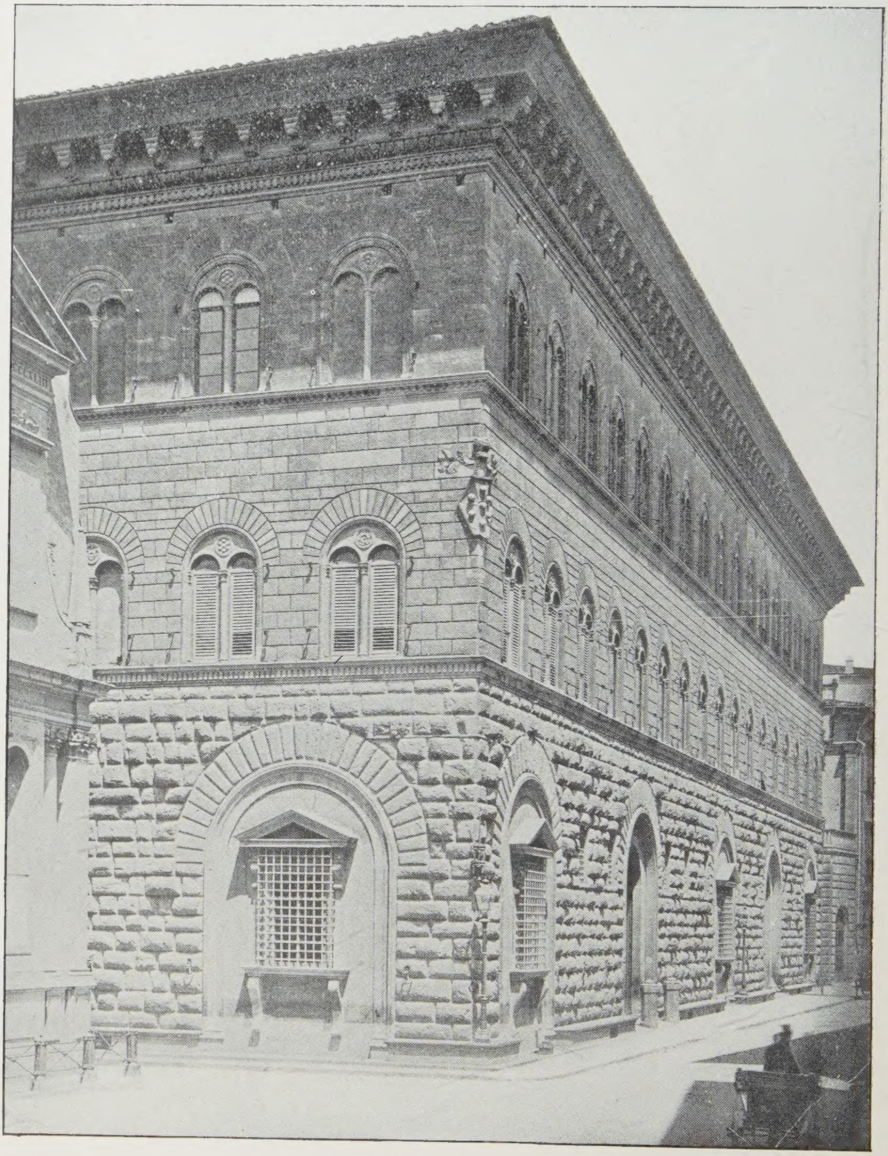
Thirteen years ago a large roof in New York was covered with Warren's Natural Asphalt, and at the present time that roof is in such good condition that the Warren Chemical and Manufacturing Company are using it for samples. It is a big roof, but when used up there are others laid about the same time, so that the supply of samples is inexhaustible. There are few architects who do not know the advantages of Warren's Natural Asphalt over coal-tar roofing preparations; but if any of our readers are interested, at the present time, in the best covering for large roofs, we would advise getting a piece of the New York roof above referred to, for comparison with roofs of other materials. A line to the New York office, 81 Fulton Street, will bring it, with considerable interesting information about asphalt roofing.

There is crying need of some comprehensive work upon schoolhouse planning, construction and design. Part I. of our forthcoming work on the Municipal Buildings of the City of Boston, designed and erected by Edmund M. Wheelwright, will come the nearest to supplying this want of anything yet published, as it will take up in every detail the modern schoolhouse, as illustrated by the most recently erected ones in the city of Boston. Mr. Wheelwright's long and careful study of schoolhouse construction and planning makes his work as authoritative as any in this country, and no architect can afford not to have the book for reference. Prof. Chandler, the present consulting architect to the mayor of Boston, is directly in touch with schoolhouse work and no better author or compiler could have been secured.



LXXII

Grille in Madonna del Orto, Venice.



LXXIII.

The Riccardi Palace, Florence.